REMARKS

Applicants with to thank Examiner Natalie Pous and her Supervisory Examiner Jackie Ho for the courteous and productive interview at the Patent and Trademark Office on July 27, 2006 with applicants' undersigned counsel.

Applicants appreciate the statements in the last Office Action that the positions taken by applicants regarding the Section 112 rejection, the obviousness double patenting rejection, and the previously presented Section 103 rejection are persuasive. Applicants understand that each has been complied with and is no longer at issue in this application.

Applicants understand that claims 1, 10, 14, 15, 17 and 18 are rejected under 35 U.S.C. Section 102(e) from the newly cited Engelson U.S. Patent No. 5,944,733, that claims 2, 3, 11 and 12 are rejected under 35 U.S.C. Section 103(a) from Engelson as a matter of design choice, and claims 5, 6 and 16 also are rejected under 35 U.S.C. Section 103(a) from Engelson as a matter of design choice.

Each of the independent claims in this application is amended as discussed during the interview. In essence, the subject matter of presently cancelled claims 2 and 3 is incorporated into currently amended claim 1, and the same

subject matter, which includes subject matter from presently cancelled claim 11, is incorporated into currently amended claim 10. As discussed during the interview, it is respectfully observed that these revisions obviate the Section 102(e) rejection, and reconsideration and withdrawal thereof are respectfully requested.

Concerning the Section 103 rejections, the Office suggests that Engelson teaches the use of a "hot melt adhesive", which Engelson identified as the "thermoplastic member" 110. Engelson's discussion of "hot melt adhesive" concerns O'Reilly U.S. Patent No. 4,735,201. Also as discussed during the interview, O'Reilly does identify hot melt adhesive for joining a metallic tip 14 to the distal end of an optical fiber 13. It was agreed during the interview that claims 1 and 10 as presented herein define over O'Reilly. O'Reilly is not currently of record and it was agreed that the Examiner would make it of record in the next correspondence from the Examiner in the present application.

More particularly, Engelson teaches that the use of a hot melt adhesive alone is not desirable. More specifically, at lines 6-14 in column 4 of Engelson, the following statement is made:

> ...those devices in which the junction is

> composed entirely of ... an adhesive, such as the hot melt adhesive disclosed in U.S. Pat. No. 4,735,201 to O'Reilly, may be prone to reliability problems as the security of a mechanically interlocking or attachable clasp or other mechanism is absent.

Current claims 1 and 10, contrary to this specific teaching of Engelson, call for a unitary hot melt adhesive coupling member that is coupled directly to the heating element coil and directly to the embolic coil by the hot melt adhesive bond. This approach of applicants precludes the mechanically interlocking or attachable clasp or other mechanism that Engelson teaches in the above quote is important to the invention of that patent. One of ordinary skill in the art, upon considering the teachings of Engelson and design choices would have been taught away from applicants' claimed structure, illustrating the unobviousness of the present invention.

Furthermore, Engelson teaches the use of a solid conducting core wire, such as 122 of Fig. 4A and 4B to transmit radio frequency energy from the energy source to the thermoplastic member of Engelson. Such a solid conducting core wire has the stiffness problems that are recognized in applicants' specification.

Paragraph [0010] of applicants' specification refers to U.S. Patent No. 5,108,407 (Geremia), which is similar to the

O'Reilly patent noted above in that same teaches transmitting laser energy through a fiber optic cable. The last sentence of applicants' paragraph [0010] points out that such fiber optic cable systems suffer from the "problem of having a separate, relatively stiff element which extends throughout the length of the catheter with resulting stiffness of the catheter." Thus, this is a problem of O'Reilly and of Geremia that applicants solve.

A solid conducting core wire such as that taught by Engelson would exhibit a similar problem that is at least as formidable as that presented by a fiber optic cable of O'Reilly or Geremia. Contrary to this prior art approach, applicants call for an elongated flexible delivery member (24), and the non-optical energy transmission conductor (28, 29) of applicants extends through the lumen of the positioning member and is coupled to the heating element. This is neither an optical fiber nor a radio frequency conducting core wire but a simple and very flexible wire for electrical current.

In addition, the thermoplastic members 110 of Figs. 1A, 1B, 2A, 2B and 3 of Engelson are not coupled directly to the embolic coil, even if they were in the form of a hot melt adhesive. Reconsideration and withdrawal of the Section 103 rejections are respectfully requested this independent reason.

Furthermore, each of the independent claims specifies that the heating element is an electrically heated coil. As is evident from applicants' drawings, such as Figs. 2, 3 and 4, having the heating element being in the form of a coil has the advantage of having the hot melt adhesive sandwiched between portions of the turns of the coil in order to enhance attachment. Contrary to this feature, Engelson shows a cylindrical conducting core wire 122 in Figs. 4A and 4B and shows a thermoplastic member 110 that surrounds the core wire 122 which is not a coil.

It was agreed at the close of the interview that all of the claims in the present application are allowable over the prior art currently of record. Accordingly, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,
COOK, ALEX, MCFARRON, MANZO,
CUMMINGS & MEHLER, LTD.

Daniel M. Riess
Registration No. 24,375

200 West Adams Street
Suite 2850
Chicago, Illinois 60606
(312) 236-8500
Dated: July 31, 2006

Customer No. 26568